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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,503	11/24/2003	Bertrand Haas	F-745	4579
<div>7590      02/05/2008</div> <div>Pittney Bowes Inc. Intellectual Property and Technology Law Dept. 35 Waterview Drive P.O. Box 3000 Shelton, CT 06484</div>				
			<div>EXAMINER</div> <div>HENNING, MATTHEW T</div>	
			<div>ART UNIT</div> <div>2131</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE</div> <div>02/05/2008</div>	<div>DELIVERY MODE</div> <div>PAPER</div>

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/720,503

Applicant(s)

HAAS, BERTRAND

Examiner

Matthew T. Henning

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11/24/03, 2/9/06, 10/9/07.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

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This action is in response to the communication filed on 11/24/2003.

**DETAILED ACTION**

Claims 1-19 have been examined.

***Title***

The title of the invention is acceptable.

***Priority***

This application has no priority claimed.

***Information Disclosure Statement***

The information disclosure statement(s) (IDS) submitted on 11/24/2003, and 2/9/2006, and 10/9/2007 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statements.

***Drawings***

The drawings filed on 11/24/2003 are acceptable for examination proceedings.

***Double Patenting***

Applicant is advised that should claim 2 be found allowable, claim 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 6, 11 and 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 1, 2, 6, 11, and 15, a method which merely manipulates data is claimed.

*A claim that requires one or more acts to be performed defines a process. However, not all processes are statutory under 35 U.S.C. 101. Schrader, 22 F.3d at 296, 30 USPQ2d at 1460. To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan (discussed in i) below), or (B) be limited to a practical application within the technological arts (discussed in ii) below). See Diamond v. Diehr, 450 U.S. at 183-84, 209 USPQ at 6 (quoting Cochrane v. Deener, 94 U.S. 780, 787-88 (1877)) ("A [statutory] process is a mode of treatment of certain materials to produce a given result. It is an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.... The process requires that certain things should be done with certain substances, and in a certain order; but the tools to be used in doing this may be of secondary consequence."). See also Alappat, 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting Diamond v. Diehr, 450 U.S. at 192, 209 USPQ at 10). See also id. at 1569, 31 USPQ2d at 1578-79 (Newman, J., concurring) ("unpatentability of the principle does not defeat patentability of its practical applications") (citing O'Reilly v. Morse, 56 U.S. (15 How.) at 114-19). If a physical transformation occurs outside the computer, a disclosure that permits a skilled artisan to practice the claimed invention, i.e., to put it to a practical use, is sufficient. On the other hand, it is necessary for the claimed invention taken as a whole to produce a practical application if there is only a transformation of signals or data inside a computer or if a process merely manipulates concepts or converts one set of numbers into another.*

**See MPEP § 2106.2(b)**

These claims are solely directed towards manipulation of data, and the claims provide no details as to how the private values are used (i.e. a practical application). Therefore, the claims recite only data transformation inside a computer. As such, claims 1, 2, 6, 11, and 15 fail to meet the statutory requirements of 35 USC 101.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless –*

*(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Davidson et al. (Patent Application Publication 2001/0040979), hereinafter referred to as Davidson.

Regarding claim 1, Davidson disclosed a method comprising: providing digital image data that represents an image (See Davidson Fig. 4A Step 420A and Paragraph 0061); applying a digital watermark to the digital image data to produce watermarked digital image data (See Davidson Fig. 4A Step 421 and Paragraph 0061); and applying a transformation to the watermarked digital image data to produce transformed watermarked digital image data (See Davidson Fig. 4A Step 422 and Fig. 4B Step 423 and Paragraphs 0061-0062 wherein the transformation is the transfer functions associated with printing and scanning the image and the print-scan distortion transformation is the compensating transfer functions; or See Davidson Fig. 4B Steps 425-426 and Paragraphs 0063-0064 wherein the transformation is the compensation transfer functions), the transformation being at least approximately an inverse of a print-scan distortion transformation (See Davidson Paragraphs 0062-0064).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Claims 2-5, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson as applied to claim 1 above, and further in view of Cook (US Patent Number 5,271,096).

Regarding claims 2, and 10, Davidson teaches applying the digital watermark to the digital image data (See Davidson Fig. 4), but fails to disclose applying the print-scan distortion transformation to the digital image data prior to embedding the watermark in the digital image data.

Cook teaches that in order to calibrate a printing and scanning distortion corrective filter, that a calibration image should be printed and scanned and then analyzed to determine the anti-distortion data needed to correct for the distortion in order to output an image substantially identical to an input image (See Cook Col. 3 Lines 16-34).

It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of Cook in the distortion compensation system of Davidson by printing and scanning a calibration image in order to determine the anti-distortion filter to be used to correct the distortion. This would have been obvious because the ordinary person skilled

1 in the art would have been motivated to properly calibrate the anti-distortion filters (See Cook  
2 Col. 3 Lines 16-34). Furthermore, it would have been obvious to the ordinary person skilled in  
3 the art at the time of invention, to utilize the input image which is to be marked as the calibration  
4 image, as this would provide the most accurate representation of how the input image will be  
5 distorted by the printer and scanner.

6 Regarding claim 3, Davidson taught printing the input image and applying the corrective  
7 filter after printing and scanning the image (See Davidson Fig. 4).

8 Cook teaches that once the distortion that will occur through printing and scanning (and  
9 other distortion) is known, an image can be processed to create an "anti-distorted image" prior to  
10 printing (and other distortion) such that once all the distortion introducing processing and  
11 printing is performed on the anti-distorted image, the final result appears to be not distorted (See  
12 Cook Col. 5 Paragraphs 1 and 2).

13 It therefore would have been obvious to the ordinary person skilled in the art at the time  
14 of invention, based on the teachings of Cook, that the order in which the anti distortion filtering  
15 and distorting processes is applied does not matter, and as such the distortion correction system  
16 of Davidson could be alternately embodied by creating an anti-distorted image which is then  
17 printed and scanned to produce an image which appears to be not distorted.

18 Regarding claim 4, Davidson and Cook disclosed scanning the printed image to produce  
19 scanned image data (See Davidson Fig. 4).

20 Regarding claim 5, Davidson and Cook disclosed analyzing the scanned image data to  
21 retrieve the watermark therein (See Davidson Fig. 4B Step 424 and Paragraph 0063).

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1           Claims 6-9, and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over  
2 Carr et al. (Patent Application Publication 2003/0130954) hereinafter referred to as Carr, and  
3 further in view of the combination of Davidson and Cook, as applied to claims 2 and 3 above.

4           Regarding claim 19, Carr disclosed a method comprising: (a) providing digital image  
5 data that represents an image (See Carr Paragraphs 0025-0026 marketing image); (b) applying a  
6 digital watermark to the digital image data to produce watermarked digital image data (See Carr  
7 Paragraph 0026); (d) retrieving a characteristic of the watermark (See Carr Paragraph 0028); (e)  
8 printing an image on the basis of the watermarked digital image data produced at step (b) (See  
9 Carr Paragraph 0014); (f) scanning the printed image to produce scanned image data (See Carr  
10 Paragraph 0036); (g) retrieving a characteristic of the watermark as represented by the scanned  
11 image data produced at step (f) (See Carr Paragraph 0036); and (h) comparing the characteristic  
12 retrieved at step (d) with the characteristic retrieved at step (g) (See Carr Paragraph 0028); but  
13 Carr failed to disclose step (c) applying a print-scan distortion transformation to the watermarked  
14 digital image data to produce transformed watermarked digital image data.

15           Davidson and Clark teach that in order to better facilitate in the retrieval of a watermark  
16 from an image that is printed and scanned, an anti-distorted image should be created prior to  
17 printing and scanning (See the rejection of claim 3 above).

18           It would have been obvious to the ordinary person skilled in the art at the time of  
19 invention to employ the teachings of Davidson and Clark in the watermarked postage metering  
20 system of Carr by creating an anti-distorted marketing image prior to printing and scanning.  
21 This would have been obvious because the ordinary person skilled in the art would have been  
22 motivated to improve the detection of the watermark data.



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1           Regarding claim 11, Carr disclosed a method comprising: providing watermark data that  
2 represents a digital watermark (See Carr Paragraph 0026); providing digital image data that  
3 represents an image; and combining the watermark data with the digital image data to produce  
4 watermarked digital image data (See Carr Paragraph 0026); but Carr failed to disclose applying a  
5 transformation to the watermark data to produce transformed watermark data, the transformation  
6 being at least approximately an inverse of a print-scan distortion transformation, and combining  
7 the image data with the transformed watermark data to produce the watermarked digital image  
8 data. However, Carr did disclose the watermark being fragile and that preferably the watermark  
9 data be hidden without leaving human-apparent evidence of alteration.

10           Davidson and Clark teach that in order to better facilitate in the retrieval of a watermark  
11 from an image that is printed and scanned, an anti-distorted image should be created prior to  
12 printing and scanning (See the rejection of claim 3 above).

13           It would have been obvious to the ordinary person skilled in the art at the time of  
14 invention to employ the teachings of Davidson and Clark in the watermarked postage metering  
15 system of Carr by creating an anti-distorted marketing image prior to printing and scanning.  
16 This would have been obvious because the ordinary person skilled in the art would have been  
17 motivated to improve the detection of the watermark data. It further would have been obvious to  
18 the ordinary person skilled in the art at the time of invention to only apply the anti-distortion  
19 filtering to the watermark data. This would have been obvious because the ordinary person  
20 skilled in the art would have been motivated to leave as little human-apparent evidence of  
21 alteration as possible.

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Regarding claim 12, Carr, Davidson and Clark taught printing an image on the basis of the watermarked digital image data (See Carr Paragraph 0014).

Regarding claim 13 Carr, Davidson and Clark taught scanning the printed image to produce scanned image data (See Carr Paragraph 0036).

Regarding claim 14, Carr, Davidson and Clark taught analyzing the scanned image data to retrieve the watermark therein (See Carr Paragraph 0036).

Regarding claims 6 and 15, Carr, Davidson and Clark taught loading the watermarked digital image data into a postage meter (See Carr Paragraph 0026).

Regarding claims 7 and 16, Carr, Davidson and Clark taught using the postage meter to print a postage indicia on a mail piece, the postage meter indicia including a printed image based on the watermarked digital image data (See Carr Paragraph 0014).

Regarding claims 8 and 17, Carr, Davidson and Clark taught scanning the printed image to produce scanned image data (See Carr Paragraph 0036).

Regarding claims 9, and 18, Carr, Davidson and Clark taught analyzing the scanned image data to retrieve the watermark therein (See Carr Paragraph 0036).

### *Conclusion*

Claims 1-19 have been rejected.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

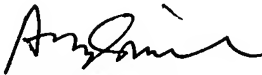
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew T. Henning whose telephone number is (571) 272-3790. The examiner can normally be reached on M-F 8-4.

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1           If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
2 supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the  
3 organization where this application or proceeding is assigned is 571-273-8300.

4           Information regarding the status of an application may be obtained from the Patent  
5 Application Information Retrieval (PAIR) system. Status information for published applications  
6 may be obtained from either Private PAIR or Public PAIR. Status information for unpublished  
7 applications is available through Private PAIR only. For more information about the PAIR  
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11 information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12  
13  
14 /Matthew Henning/  
15 Assistant Examiner  
16 Art Unit 2131  
17 1/30/2008

  
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